

PATENT SPECIFICATION



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COMPLETE SPECIFICATION

Improvements in or relating to Gas Masks for Horses

I, OTTO HEINRICH DRÄGER, of German Nationality, of Moislingerallee 53, Lübeck, Germany, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to gas masks of T-shape of the type provided with two filter fittings each disposed in one arm of the T, and designed to be worn by horses, the opening in the third limb of the T being adapted to be maintained in sealing engagement with the upper jaw of the horse.

In the use of these masks there is experienced a difficulty in securing the filters so that they may be readily exchangeable without the use of tools, but yet will remain firmly seated in the mask even when exposed to shock and vibration.

According to the invention, the aforesaid difficulty is overcome by the use as filter carriers of cuffs or sleeves formed of rubber or rubberised fabric and surrounding the filters gas-tightly, said cuffs having overturned outer edges which are secured to the outside of the mask body and being each provided at the base or inner end with an internal flange which prevents insertion of the filter too deeply into the mask. The cuffs have preferably a cylindrical or slightly conical form. Advantageously, they are made of somewhat less diameter than the filter so that a gas-tight seating is ensured both at the outer edge and also at the base. A special advantage of the cuff-like formation of the filter carrier is that the filters can be readily and rapidly exchanged. For this purpose, after removing the mask, the hands are passed through the open limb of the T which in use is adapted to be sealed by engagement with the upper jaw of the horse, and so into the mask body whereby outward pressure may be applied from the inside against the filters. The cuffs may thus be curled outwardly and the filters released with a brief application of pressure.

In order to secure the filters against falling out, there are provided safety straps which are secured at one end to the

mask body and are adapted to be fastened at the other end to the mask body by means of a buckle fastening, said straps being each advantageously orificed to engage a central knob or button at the outer end of the respective filter.

As the straps are liable to be damaged by abutment against a wall or against a pole and thus to be broken, the outer edge of the filter cuff is raised at both sides of the safety strap, so that at these points there are presented buffers or cushions which take up shocks or other mechanical actions and relieve the straps. This relief is assisted by the bearing of the strap against the filter, because the knob or button and thus the centre of the strap lies lower than the curled edge of the cuff.

In the accompanying drawing there is illustrated one form of mask according to the invention. In the drawings Fig. 1 shows the mask fitted with filters, partly in section. Fig. 2 is an end view of the mask. Fig. 3 is a fragmentary vertical section through the mask shortly before ejection of a filter.

The mask illustrated consists of a T-shaped structure *a*, the opposed branches *b* and *c* of which present openings for reception of filters *d* and *e*. The filters are disposed in cuffs or sleeves *f*, the outer overturned edges of which are secured to the outside of the branches *b* and *c*. At the base or inner end of each cuff is a flange *g* preventing the filter *d* or *e* from slipping too far into the body *a* of the mask. The filters are protected from falling out by safety straps *h*, which, as shown in Figs. 1 and 2, are each secured at one end of the mask body, and at the other end are adapted to be secured to said body by a buckle fastening. Each strap is formed with an orifice for engagement with a central button on the outer end of the filter. If a filter is to be exchanged, then, as shown in Fig. 3, the strap *h* is loosened and the filter is ejected from the mask by pressure applied from the inside, the cuff *f* curling outwardly in forward direction.

As shown clearly in Fig. 1, when the strap is fastened, the outer edge of each cuff is raised at both sides of the strap as

at *m* and *n*, whereby to afford buffers or cushions which take up shocks on the filter and thereby relieve the strap.

o denotes the exhalation valve.

- 5 Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:
- 10 1. A gas mask for horses, consisting of a T-shaped hollow body having opposed openings for reception of filters, characterised by the arrangement of cuffs or sleeves (*f*) surrounding the filters (*d* and *e*) gas-tightly, said cuffs being
- 15 formed of rubber or rubberised fabric and serving as filter carriers, said sleeves having overturned edges secured to the outside of the mask body and having at their inner ends flanges (*g*) which prevent insertion of the filters (*d*, *e*) too
- 20 deeply into the mask.
2. A gas mask as claimed in claim 1,

further characterised in that the filters (*d*, *e*) are prevented from falling out of the mask by safety straps (*h*) which are each secured at one end to the mask body and are adapted to be secured at the other end to said mask body by a buckle fastening, said straps being preferably each orificed to engage a knob or button on the outer end of the respective filter.

3. A gas mask as claimed in claim 2, further characterised in that the outer edge of each cuff (*f*) is raised at both sides of the safety strap, whereby to afford buffers or cushions which take up shocks or frictional stresses on the filter and thereby relieve the strap.

Dated this 20th day of June, 1939.

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Fig. 1

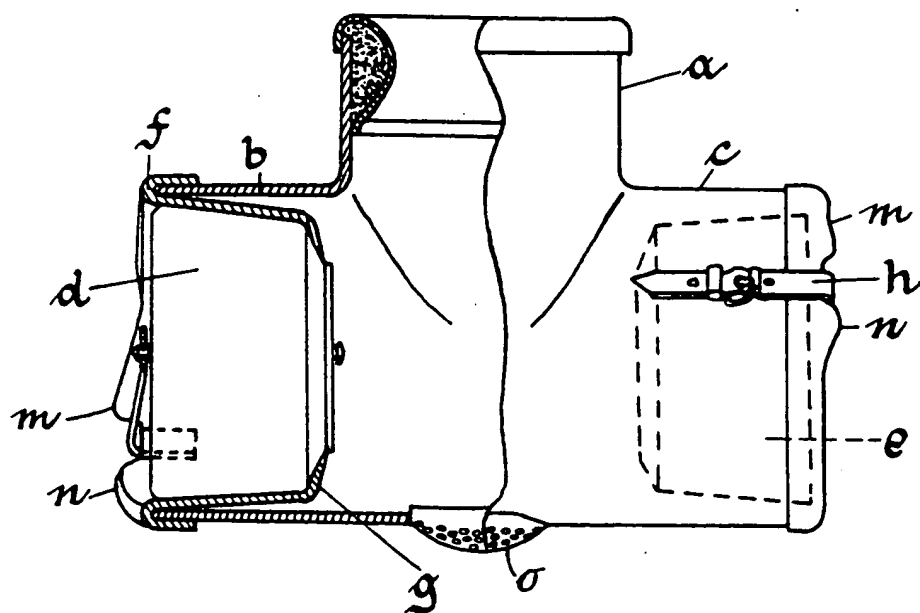


Fig. 2

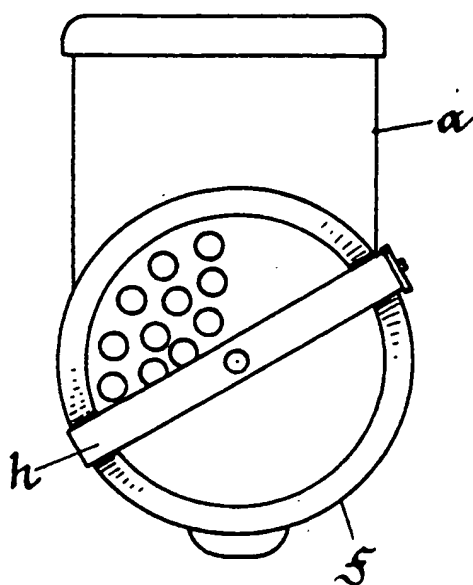
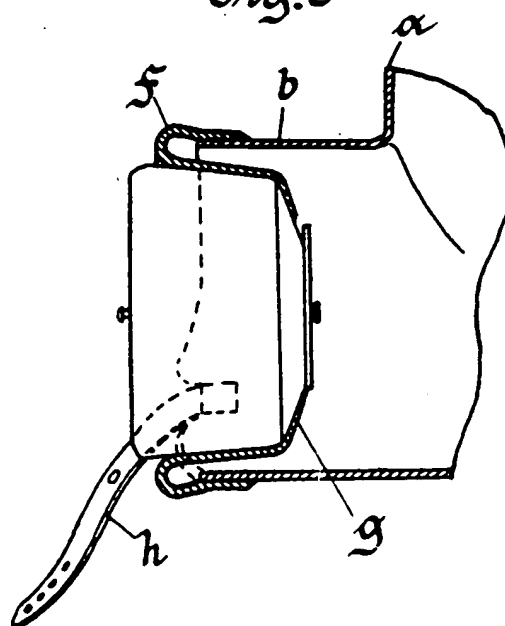


Fig. 3



[This Drawing is a reproduction of the Original on a reduced scale.]

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